

0260

1649

OIPE

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/545,334

DATE: 05/02/2000
 TIME: 13:22:40

Input Set : A:\0803.SEQLIST.txt
 Output Set: N:\CRF3\050200\I545334.raw

4 <110> APPLICANT: Zinselmeier, Chris
 5 Habben, Jeff
 6 Tomes, Dwight
 8 <120> TITLE OF INVENTION: Regulated Expression of Genes in Plant
 9 Seeds
 11 <130> FILE REFERENCE: 0803p
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/545,334
 C--> 13 <141> CURRENT FILING DATE: 2000-04-07
 13 <160> NUMBER OF SEQ ID NOS: 12
 15 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 1608
 20 <212> TYPE: DNA
 21 <213> ORGANISM: Zea mays
 23 <220> FEATURE:
 24 <221> NAME/KEY: CDS
 25 <222> LOCATION: (1)...(1605)
 27 <400> SEQUENCE: 1
 28 atg gcg gtg gtt tat tac ctg ctg ggc ctg atc gcc tgc tct
 29 Met Ala Val Val Tyr Tyr Leu Leu Leu Ala Gly Leu Ile Ala Cys Ser 48
 30 1 5 10 15
 32 cat gca cta gca gca ggc acg ctt ggc ctc gga gaa gat cgc ggc cgt
 33 His Ala Leu Ala Ala Gly Thr Leu Ala Leu Gly Glu Asp Arg Gly Arg 96
 34 20 25 30
 36 ccc tgg cca gcc ttc ctc gcc ggc ctg gcc ttg gac ggc aag ctc cgg
 37 Pro Trp Pro Ala Phe Leu Ala Ala Leu Ala Leu Asp Gly Lys Leu Arg 144
 38 35 40 45
 40 acc gac agc aac gcg acg gcg ggc tcc acg gac ttc ggc aac atc
 41 Thr Asp Ser Asn Ala Thr Ala Ala Ser Thr Asp Phe Gly Asn Ile 192
 42 50 55 60
 44 acg tcg gcg ctc ccg gcg gtc cta tac ccg tcc acg ggc aac atc
 45 Thr Ser Ala Leu Pro Ala Ala Val Leu Tyr Pro Ser Ser Thr Gly Asp 240
 46 65 70 75 80
 48 ctg gtg gcg ctg ctg agc gcg gcc aac tcc acc ccg ggg tgg ccc tac
 49 Leu Val Ala Leu Leu Ser Ala Ala Asn Ser Thr Pro Gly Trp Pro Tyr 288
 50 85 90 95
 52 acc atc gcg ttc ccg ggc ccg ggc cac tcc ctc atg ggc cag gcc ttc
 53 Thr Ile Ala Phe Arg Gly Arg Gly His Ser Leu Met Gly Gln Ala Phe 336
 54 100 105 110
 56 gcc ccc ggc ggg gtg gtc gtc aac atg gcg tcc ctg ggc gac gcc gcc
 57 Ala Pro Gly Gly Val Val Val Asn Met Ala Ser Leu Gly Asp Ala Ala 384
 58 115 120 125
 60 gcc gcc ggc ccg ccg ccg gtc aac gtg tcc ggc gac ggc cgc tac gtg
 61 Ala Ala Ala Pro Pro Arg Val Asn Val Ser Ala Asp Gly Arg Tyr Val 432
 62 130 135 140
 64 gac gcc ggc ggc gag cag gtg tgg atc gac gtg ctg cgc ggc tct ctg
 65 Asp Ala Gly Gly Glu Gln Val Trp Ile Asp Val Leu Arg Ala Ser Leu 480

ENTERED

RECEIVED

JUN 30 2000

TECH CENTER 1600/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/545,334

DATE: 05/02/2000

TIME: 13:22:40

Input Set : A:\0803.SEQLIST.txt
Output Set: N:\CRF3\050200\I545334.raw

66	145	150	155	160	
68	gct	ggc	gtg	gct	528
69	Ala	Arg	Gly	Val	
70	Ala	Pro	Arg	Ser	
72	Trp	Thr	Asp	Tyr	
73	Leu	Tyr	Leu	Thr	
74	165	170	175		
76	gtc	ggc	acg	ctg	
77	tcc	aac	gca	ggc	
78	180	185	190		
79	195	200	205		
80	cat	ggg	gag	atg	
81	His	Gly	Pro	Gln	
82	Glu	Met	Val	Thr	
83	Thr	Cys	Ser	Lys	
84	210	215	220		
85	Asp	Ala	Val	Leu	
86	Gly	Gly	Leu	Gly	
87	225	230	235		
88	cgg	atc	gct	gtg	
89	gag	ccg	ccg	ccg	
90	90	245	250	255	
92	gtg	tac	acc	gac	
93	ttc	gct	gct	gct	
94	Asp	Tyr	Thr	Asp	
95	Phe	Ala	Ala	Phe	
96	260	265	270		
97	97	Arg	Ile	Ala	
98	Ala	Val	Glu	Pro	
99	Pro	Ala	Pro	Ala	
100	Arg	Ala	Arg	Trp	
101	Ala	Arg	Trp	Val	
102	290	295	300		
104	aac	acg	ggg	ttc	
105	ttc	acc	gac	gac	
106	Asn	Thr	Gly	Phe	
107	Phe	Phe	Thr	Asp	
108	305	310	315	320	
109	gct	ggg	gag	ccg	
110	109	Ala	Gly	Arg	
111	Ala	Asn	Ala	Thr	
112	110	Thr	Thr	Val	
113	112	325	330	335	
114	Asn	Tyr	Asp	Asn	
115	113	Ala	Ala	Thr	
116	114	Ala	Ala	Ala	
117	tcc	gtg	ctg	ggc	
118	115	acc	acg	acc	
119	116	340	345	350	
120	gac	gtg	tcc	tac	
121	117	acc	ttc	ttt	
122	Asp	Val	Ser	Tyr	
123	Tyr	Thr	Ala	Phe	
124	122	355	360	365	
125	Ala	Leu	Asn	Lys	
126	123	Leu	Gly	Leu	
127	Trp	Arg	Val	Pro	
128	124	370	375	380	
129	Met	Phe	Val	Pro	
130	125	385	390	395	
131	Arg	Arg	Ile	Ala	
132	126	405	410	400	
133	Asp	Phe	Asp	Arg	
134	127	410	415	415	

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/545,334

DATE: 05/02/2000

TIME: 13:22:40

Input Set : A:\0803.SEQLIST.txt

Output Set: N:\CRF3\050200\I545334.raw

132	aag ggc atc ttg cag ggc acc gac gtc ggc ccc atc gtc tac	1296
133	Lys Gly Ile Leu Gln Gly Thr Asp Ile Val Gly Pro Leu Ile Val Tyr	
134	420	425
135	ccc ctc aac aaa tcc atg tgg gac gac gtc gcg gcg acg ccg	1344
136	425	430
137	Pro Leu Asn Lys Ser Met Trp Asp Asp Gly Met Ser Ala Ala Thr Pro	
138	435	440
139	tcg gag gac gtg ttc tac gcg gtg tcg ctc ttc tcg tcg gtg gcg	1392
140	440	445
141	Ser Glu Asp Val Phe Tyr Ala Val Ser Leu Leu Phe Ser Ser Val Ala	
142	450	455
143	ccc aac gac ctg gcg agg ctg cag gag cag aac agg agg atc ctg cgc	1440
144	455	460
145	Pro Asn Asp Leu Ala Arg Leu Gln Glu Gln Asn Arg Arg Ile Leu Arg	
146	465	470
147	ttc tgc gac ctc gcc ggg atc cag tac aag acc tac ctg gcg cgg cac	1488
148	475	480
149	Phe Cys Asp Leu Ala Gly Ile Gln Tyr Lys Thr Tyr Leu Ala Arg His	
150	485	490
151	acg gac cgc agt gac tgg gtc cgc cac ttc ggc gcc gac gag tgg aat	495
152	500	505
153	Thr Asp Arg Ser Asp Trp Val Arg His Phe Gly Ala Ala Glu Trp Asn	1536
154	510	515
155	cgc ttc gtg gag atg aag aac aag tac gac ccc aag agg ctg ctc tcc	1584
156	515	520
157	Arg Phe Val Glu Met Lys Asn Lys Tyr Asp Pro Lys Arg Leu Leu Ser	
158	520	525
159	ccc ggc cag gag atc ttc aac tga	1608
160	530	535
161	Pro Gly Gln Asp Ile Phe Asn	
162	530	535
163	<210> SEQ ID NO: 2	
164	<211> LENGTH: 535	
165	<212> TYPE: PRT	
166	<213> ORGANISM: Zea mays	
167	<400> SEQUENCE: 2	
168	Met Ala Val Val Tyr Tyr Leu Leu Ala Gly Leu Ile Ala Cys Ser	
169	1	5
170	His Ala Leu Ala Ala Gly Thr Leu Ala Leu Gly Glu Asp Arg Gly Arg	10
171	20	25
172	Pro Trp Pro Ala Phe Leu Ala Ala Leu Ala Leu Asp Gly Lys Leu Arg	30
173	35	40
174	Thr Asp Ser Asn Ala Thr Ala Ala Ser Thr Asp Phe Gly Asn Ile	45
175	50	55
176	Thr Ser Ala Leu Pro Ala Ala Val Leu Tyr Pro Ser Ser Thr Gly Asp	60
177	65	70
178	Leu Val Ala Leu Leu Ser Ala Ala Asn Ser Thr Pro Gly Trp Pro Tyr	75
179	85	90
180	85	95
181	Thr Ile Ala Phe Arg Gly Arg Gly His Ser Leu Met Gly Gln Ala Phe	100
182	100	105
183	Ala Pro Gly Gly Val Val Val Asn Met Ala Ser Leu Gly Asp Ala Ala	110
184	115	120
185	Ala Ala Ala Pro Pro Arg Val Asn Val Ser Ala Asp Gly Arg Tyr Val	125
186	130	135
187	Asp Ala Gly Gly Glu Gln Val Trp Ile Asp Val Leu Arg Ala Ser Leu	140
188	145	150
189	155	160

RECEIVED

JUN 2 2000

CC

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/545,334 DATE: 05/02/2000
 TIME: 13:22:40
 Input Set : A:\0803.SEQLIST.txt
 Output Set: N:\CRF3\050200\I545334.raw

191 Ala Arg Gly Val Ala Pro Arg Ser Trp Thr Asp Tyr Leu Tyr Leu Thr
 192 165 170 175
 193 Val Gly Gly Thr Leu Ser Asn Ala Gly Ile Ser Gly Gln Ala Phe Arg
 194 180 185 190
 195 His Gly Pro Gln Ile Ser Asn Val Leu Glu Met Asp Val Ile Thr Gly
 196 195 200 205
 197 His Gly Glu Met Val Thr Cys Ser Lys Gln Leu Asn Ala Asp Leu Phe
 198 210 215 220
 199 Asp Ala Val Leu Gly Gly Leu Gly Gln Phe Gly Val Ile Thr Arg Ala
 200 225 230 235
 201 Arg Ile Ala Val Glu Pro Ala Pro Ala Arg Ala Arg Trp Val Arg Leu
 202 245 250 240
 203 Val Tyr Thr Asp Phe Ala Ala Phe Ser Ala Asp Gln Glu Arg Leu Thr
 204 260 265 255
 205 Ala Pro Arg Pro Gly Gly Gly Ala Ser Phe Gly Pro Met Ser Tyr
 206 275 280 270
 207 Val Glu Gly Ser Val Phe Val Asn Gln Ser Leu Ala Thr Asp Leu Ala
 208 290 295 300
 209 Asn Thr Gly Phe Phe Thr Asp Ala Asp Val Ala Arg Ile Val Ala Leu
 210 305 310 315
 211 Ala Gly Glu Arg Asn Ala Thr Thr Val Tyr Ser Ile Glu Ala Thr Leu
 212 325 330 320
 213 Asn Tyr Asp Asn Ala Thr Ala Ala Ala Val Asp Gln Glu Leu Ala
 214 340 345 335
 215 Ser Val Leu Gly Thr Leu Ser Tyr Val Glu Gly Phe Ala Phe Gln Arg
 216 355 360 350
 217 Asp Val Ser Tyr Thr Ala Phe Leu Asp Arg Val His Gly Glu Glu Val
 218 370 375 365
 219 Ala Leu Asn Lys Leu Gly Leu Trp Arg Val Pro His Pro Trp Leu Asn
 220 385 390 395
 221 Met Phe Val Pro Arg Ser Arg Ile Ala Asp Phe Asp Arg Gly Val Phe
 222 405 410 400
 223 Lys Gly Ile Leu Gln Gly Thr Asp Ile Val Gly Pro Leu Ile Val Tyr
 224 420 425 415
 225 Pro Leu Asn Lys Ser Met Trp Asp Asp Gly Met Ser Ala Ala Thr Pro
 226 435 440 430
 227 Ser Glu Asp Val Phe Tyr Ala Val Ser Leu Leu Phe Ser Ser Val Ala
 228 450 455 460
 229 Pro Asn Asp Leu Ala Arg Leu Gln Glu Gln Asn Arg Arg Ile Leu Arg
 230 465 470 475
 231 Phe Cys Asp Leu Ala Gly Ile Gln Tyr Lys Thr Tyr Leu Ala Arg His
 232 485 490 480
 233 Thr Asp Arg Ser Asp Trp Val Arg His Phe Gly Ala Ala Glu Trp Asn
 234 500 505 495
 235 Arg Phe Val Glu Met Lys Asn Lys Tyr Asp Pro Lys Arg Leu Leu Ser
 236 515 520 510
 237 Pro Gly Gln Asp Ile Phe Asn 525
 238 530 535
 240 <210> SEQ ID NO: 3

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/545,334
 DATE: 05/02/2000
 TIME: 13:22:40
 Input Set : A:\0803.SEQLIST.txt
 Output Set: N:\CRF3\050200\I545334.raw

```

241 <211> LENGTH: 51
242 <212> TYPE: DNA
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Synthesized based on sequence from Agrobacterium
247 tumefaciens
249 <400> SEQUENCE: 3
250 caucaucauc auggatccac caatggatct acgtctaatt ttccgtccaa c
252 <210> SEQ ID NO: 4
253 <211> LENGTH: 42
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Synthesized based on sequence from Agrobacterium
259 tumefaciens
261 <400> SEQUENCE: 4
262 cuacuacuac uagtttaactc acattcgaaa tggtggtcct tc
264 <210> SEQ ID NO: 5
265 <211> LENGTH: 29
266 <212> TYPE: DNA
267 <213> ORGANISM: Zea mays
269 <400> SEQUENCE: 5
270 catgccccatgg cgggtgggtta ttacctgt
272 <210> SEQ ID NO: 6
273 <211> LENGTH: 31
274 <212> TYPE: DNA
275 <213> ORGANISM: Zea mays
277 <400> SEQUENCE: 6
278 cgggatccctc atcatcaggtaa gaagatgtcc t
280 <210> SEQ ID NO: 7
281 <211> LENGTH: 5622
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Promoter and terminator from Zea mays as found in
287 Genbank Accession #S78780; gene from Agrobacterium
288 tumefaciens as found in Molecular and General
289 Genetics 216:388-394 (1989).
291 <400> SEQUENCE: 7
292 gctctagatt atataattta taagctaaac aacccggccc taaaggacta tcgtatcacc
293 tatctaaata agtcacggga gtttgcacg tccacttcgt cgccacggat tgcgtttc 60
294 ttgttggaaag catattcagc caatctccac acataaagggt ttatgtataa acttacattt 120
295 agtcagttt aatttacagtc aattttggat gcatatgtat ggttctcaat ccatataagt 180
296 tagatggaaa aataaagggttta aattttatct taatttcactc caacatataat ggtatcaca 240
297 tactcatgtg catccaaaca aactacttat attggggatgta atttggtaga aattttacta 300
298 acttacacac taagccaaatc ttactatataaagccacca gtttcaacgca tcgtcccg 360
299 tcaatattat taaaaaaactc ctacatttct ttataatcaa cccgcactct tataatctct 420
300 tctctactac tataataaga gagtttatgt aaaaaataag gtggaaattat ctataagtgt 480
301 tctggatatt ggttggc tcccatattc acacaaccta atcaatagaa aacatatgtt 540
302 600

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/545,334

DATE: 05/02/2000

TIME: 13:22:41

Input Set : A:\0803.SEQLIST.txt

Output Set: N:\CRF3\050200\1545334.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date